

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 1, 4-10, 12, 14-16, and 19-27 are now pending in this application.

Applicant wishes to thank the Examiner for the careful consideration given to the claims.

Rejection of claims 1, 4-10, 12, 14-16, and 19-27 based on Seto

Claims 1, 4-10, 12, 14-16, and 19-27 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication 2003/0067219 (“Seto”). For at least the following reasons, this rejection is traversed.

Claim 1, as amended, recites an automatic brake system with a forward-monitoring unit and “a control unit that varies an assumed characteristic of manual steering operation in accordance with a condition of a path where the vehicle is traveling and executes an automatic braking control operation to avoid a potential collision with the obstacle, based on the assumed manual steering operation characteristic, wherein the assumed manual steering operation characteristic that is varied comprises at least one of a maximum steering angle and a steering speed.” Seto does not teach or suggest this combination of features.

For example, Seto does not vary an assumed manual steering operation characteristic of a maximum steering angle or a steering speed. Quite the contrary, Seto makes the assumption that the driver turns a steering wheel to a maximum steered position at a certain steering speed. (See paragraph 0052 of Seto.) Because Seto does not teach or suggest that the assumed manual steering operation characteristic that is varied comprises at least one of a maximum steering angle and a steering speed, Seto does not teach or suggest all the features of claim 1.

For similar or analogous reasons, claims 10 and 12 are also not rendered unpatentable over the prior art because they recite an automatic brake system with a control means or unit that varies an assumed characteristic of manual steering operation “wherein the assumed manual steering operation characteristic that is varied comprises at least one of a maximum steering angle and a steering speed.”

Claims 4-9, 14-16, and 19-27 depend from and contain all the features of claim 1 or claim 12, and are allowable for at least the reasons set forth above, without regard to the further patentable features contained therein.

Additionally, in relation to dependent claims 5-6, 8-9, 22-23, and 25-26, there is no teaching or suggestion of an “avoidance space width detecting unit that detects widths of spaces on the sides of the obstacle.” According to an embodiment of the present invention, the degree of easiness of steering-based collision avoidance may be determined, for example, in accordance with the width of space on the sides of the obstacle. Then, the direction of steering-based collision avoidance can be determined in accordance with the degree of easiness of the steering-based collision avoidance prior to the consideration of the required lateral displacement. Further, the width of space on the sides of the obstacle can be defined, for example, by the geometrical relationship between the obstacle and the width of the road. In contrast, Seto merely determines the vehicle interval distance between the host vehicle and the obstacle (i.e., the preceding vehicle) and a lateral moved distance.

The lateral moved distance of Seto is not the same thing as detecting the widths of spaces on the sides of the obstacle. The “avoidance space width” is an available space though which the host vehicle is to pass, while the “lateral distance” is merely a distance that is necessary for the host vehicle to move in the lateral direction. In an embodiment of the present application, as the “avoidance space width” increases, the degree of easiness of steering-based collision avoidance increases. On the other hand, in Seto, as the “lateral distance” increases, the required time increases so that the difficulty of steering-based collision avoidance increases. Seto makes no mention whatsoever about detecting the widths of the available spaces on the sides of the obstacle. In response to Applicant’s assertion that Seto does not teach the detection of the widths of spaces on the sides of the obstacle, the PTO asserts the following:

sections 0059-0075 [of Seto] disclose...the amount of avoidance space in the form of a lateral distance [that] is needed to make a pass to either side possible [and] selection of the side with the greatest space available...These are the inherent considerations of “assumed steering characteristics” which are being taught by Seto et al., where section 0037 further teaches the considerations for braking and sections 0040 through 0053 clearly teach and disclose the numerous “considerations” which affect the steering characteristics which are “assumed” or “varied” on a constant updated basis in conjunction with the detected dynamic state of the vehicle and its proximity to a preceding vehicle and the allowed space detected to each side thereof. (Paragraph 4 of the Office Action.)

The passages of Seto cited by the PTO above do not teach an avoidance space width detecting unit that detects the widths of spaces on the sides of the obstacle or that such widths are being measured or determined. Indeed, no where in Seto does it teach or suggest such a

unit, measurement, or determination. The assertion that such a feature is inherent is improper because inherency has not been established, as set forth in MPEP 2112 which reads:

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)...“To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’ “ *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)...“In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

The PTO has not established or provided any basis or support, in Seto or any other prior art, for the statement that the widths of spaces on the sides of the obstacle are being detected, measured, etc.; thus no basis in fact has been established. Also, no technical reasoning has been set forth to support the determination that such a detection of widths necessarily flows from the teachings of Seto. Merely pointing to a plurality of variables from paragraphs 0040-0051 of Seto does not support the assertion that the particular variables of the widths of the spaces on the sides of the obstacle are being detected, particularly when the particular variables are not presented in any listing of variables or any equations in Seto. Because Seto does not teach (inherently or explicitly) that the widths of spaces on the sides of the obstacle are being detected, Seto does not teach all the features of claims 5-6, 8-9, 22-23, and 25-26 for at least this additional reason.

For at least these reasons, favorable reconsideration is respectfully requested.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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